

TITLE OF THE INVENTION

SUPPORT MEMBER FOR AN ASSEMBLY

CROSS-REFERENCE TO RELATED APPLICATION

5 This application is a continuation-in-part of co-pending application Serial No. 10/303,382, filed November 22, 2002. ^{now abandoned}
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10/27/04.

FIELD OF THE INVENTION

10 The present invention relates to the field of mechanical supports. In particular, the invention is directed to mechanical supports for use with conductors designed to transmit electromagnetic energy and/or conduits that carry gases or fluids. The mechanical supports provide a wide range of motion in one direction and a limited range of motion in an opposite direction. The invention is also directed to assemblies incorporating the mechanical
15 supports.

BACKGROUND OF THE INVENTION

20 The desire to have movable ribbon cables and other assemblies of electrical conductors, optical conductors, or pneumatic conduits in industrial machinery lead to the development of flexible supports for the assemblies. Many of the supports have taken the form of so-called "cable tracks." Cable tracks are made of a linear series of interlocking segments that partially surround and cradle a group of conductors or conduits. The interlocking segments often have surface features that interact to confine the range of
25 motion of the cable tracks and the associated conductors or conduits in order to prevent excessive bending or kinking of the conductors or conduits. In some applications, the motion of a cable track ranges between a flattened configuration and a configuration that curves in only one direction. Cable tracks are limited in many applications by their bulky size, weight, large bend radius, mechanical vibration, power consumption, and rapid wear. In some applications, such as manufacturing in a clean room environment, wear of the cable
30 track material often produces particulates that contaminate the work area or work product.

In an effort to reduce the size and weight of cable tracks, European Patent No. 528,141 to Elocab Sonderkabel GmbH & Co. teaches the incorporation of a cable track-like